

The effect of Aminophyllin on recovery duration ,postoperative shivering and PONV with elective general surgery

Background and objective: Post operative shivering is one of the common problems after general anesthesia and may lead to multiple complications such as latent recovery from anesthesia and heart problems. Different drug and methods have been used in prevention and treatment of the post operative shivering. The aim of study was to examine the effect of preanesthesia administration of aminophylline on the post operative shivering incidence in compare to the effect of placebo.

Methods: In this randomized placebo control double-blind clinical trial 88 patients were scheduled for elective operation, randomly assigned to one of two groups. In first group, 4mg/kg of aminophylline, in second group 0.4mg/kg normal saline were administered immediately before the induction of anesthesia. In all patients anesthesia induced equivalently. Systolic blood pressure and heart rate of patients were measured before the induction of anesthesia, during that and in the recovery room. Also incidence of postoperative shivering, nausea and vomiting was monitored and recovered by the anesthesiologist for the recovery section.

Results: Post operative shivering was observed in 6.8% of patients in aminophylline group which were significantly less than the incidence of post operative shivering in control group (27.3%). Variables of heart rate and blood pressure did not change significantly after the administration of aminophylline when compared with the control group (although we observed a slight but not statistically significant increase in heart rate in aminophylline group ($p > 0.05$). Post operative nausea was observed in 4.54% of aminophylline group which were significantly less than the incidence of post operative nausea in control group (20.45 %) ($p = 0.025$). The incidence of vomiting was similar among two groups of study. ($p = 1.00$)

Conclusion: Administration of 0.4mg/kg Aminophyllin before the induction of anesthesia has significant effect on the reduction of operative shivering incidence. As a result the hemodynamic stability can be used in outoperation particularly in patients.

Keywords: General anesthesia, post operative shivering, Aminophyllin, recovery